

## SPECIFICATION AMENDMENTS

Please amend the ABSTRACT as follows:

### **ABSTRACT**

B<sup>1</sup> The present invention provides chimeric ~~GPCRs that display novel downstream signaling properties~~ Edg receptors, useful as components of an assay system. The present invention also provide methods of screening for compounds that bind a chimeric Edg receptor, for example, by contacting a chimeric Edg receptor with a compound and detecting a change in chimeric Edg receptor-mediated activity such as calcium mobilization.

## SPECIFICATION AMENDMENTS

Please amend the specification as follows:

Amend the paragraph beginning on page 7, line 18, as indicated by the underlined portion, and amend the subsequent table by adding the words "Table 1" and enlarging the font size of the lettering used in the table, as shown below:

The amino acid notations used herein for the twenty genetically encoded L-amino acids are conventional and are as shown in Table 1. follows:

**Table 1**

<b>Amino Acid</b>	<b>One-Letter Abbreviation</b>	<b>Three Letter Abbreviation</b>
Alanine	A	Ala
Arginine	R	Arg
Asparagine	N	Asn
Aspartic acid	D	Asp
Cysteine	C	Cys
Glutamine	Q	Gln
Glutamic acid	E	Glu
Glycine	G	Gly
Histidine	H	His
Isoleucine	I	Ile
Leucine	L	Leu
Lysine	K	Lys
Methionine	M	Met
Phenylalanine	F	Phe
Proline	P	Pro
Serine	S	Ser
Threonine	T	Thr
Tryptophan	W	Trp
Tyrosine	Y	Tyr
Valine	V	Val

Amend Table 2, beginning on page 18, line 13, by changing the font size and spacing as indicated below (no additions or deletions are to be made to Table 2):

**Table 2**

**Amino Acid Sequences of Edg Receptors**

Human Edg 1 (SEQ ID NO: 1)	MGPTSVPLVKAHRSSVSDYVNYDIIVRHYNITGKLNISAD KENSIKLTSVVFILICCFIILENIFVLLTIWKTKKFHRPM YYFIGNLALSDDLAVAYTANLLLSGATTYKLTTPAQWFLR EGSMFVALSASVFSLLAIAIERYITMLKMKLHNGSNNFRL FLLISACWVISLILGGLPIMGWNCISALSSCSTVLPLYHK HYILFCTTVFTLLLLSIVILYCRIYSLVRTRSRRLTFRKN ISKASRSSEKSLALLKTVIIVLSVFIACWAPLFIILLLDV GCKVKTCDILFRAEYFLVLAVLNSGTNP IIYTLTNKEMRR AFIRIMSCCKCPSGDSAGKFKRPIIAGMEFSRSKSDNSSH PQKDEGDNPETIMSSGNVNSSS
Genbank Accession No. AF233365	
Human Edg2 (SEQ ID NO:30)	MAAISTSI PVISQPQFTAMNEPQCFYNESIAFFYNRSGKH LATEWNTVSKLVMGLGITVCI FIMLANLLVMVAI YVNRRF HFPIYYLMANLAAADFFAGLAYFYLMFNTGPNTRRLTVST WLLRQGLIDTSLTASVANLLAIAIERHITVFRMQLHTRMS NRRVVVVIVVIWTMAIVMGAIPSVGWNCICDIENCSNMAP LYSDSYLVFWAIFNLVTFVVMVLYAHIFGYVRQRTMRMS RHSSGPRRNRDTMMSLLKTVVIVLGAFFIICWTPGLVLLLL DVCCPQCDVLAYEKFFLLLAEFNSAMNP IIYSYRDKEMSA TFRQILCCQRSENPTGPTEGSDRSASSLNHTILAGVHSND HSVV
Genbank Accession No. U78192	
Human Edg 3 (SEQ ID NO:2)	MATALPPRLQPVRGNETLREHYQYVGKLAGRLKEASEGST LTTVLFLVICSFIVLENLMVLIAIWKNNKFHNRMYFFIGN LALCDLLAGIAYKVNILMSGKKTFSLSPTVWFLREGSMFV ALGASTCSLLAIAIERHLTMIKMRPYDANKRHRVFLIGM CWLIAFTLGALPILGWNC LHNLPDCSTILPLYSKKYIAFC ISIFTAILVTIVILYARIYFLVKSSSRKVANHNNSERSMA LLRTVVIVVSVFIACWSPLFILFLIDVACRVQACPILFKA QWFIVLAVLNSAMNPVIYTLASKEMRRRAFFRLVCNCLVRG RGARASPIQPALDPSRSKSSSSNNSSHSPKVKEDLPHTDP SSCIMDKNAALQNGIFCN
Genbank Accession No. X83864	

Human Edg4  
(SEQ ID NO:31)

Genbank  
Accession No.  
AF233092

MVIMGQCYINETIGFFYNNSGKELSSHWRPKDVVVVALGL  
TVSVLVLLTNLLVIAAIA SNRRFHQPIYYLLGNLAAADLF  
AGVAYLFLMFHTGPRTARLSLEGWFLRQGLDTSLTASVA  
TLLAIAVERHRSVMAVQLHSRLPRGRVVMLIVGVWVAALG  
LGLLPAHSWHCLCALDRCSRMAPLLSRSYLAVWALSLLV  
FLLMVAVYTRIFFYVRRRVQMAEHVSCHPRYRETTLSLV  
KTVVILGAFVVCWTPGQVVLLLDGLGCESC NVLAVEKYF  
LLLAEANSLVNAAVYSCRDAEMRRTFRRLLCCACLRQSTR  
ESVHYTSSAQGGASTRIMLPENGHPLMDSTL

Human Edg 4 mt  
(SEQ ID NO:32)

Genbank  
Accession No.  
AF011466

MVIMGQCYINETIGFFYNNSGKELSSHWRPKDVVVVALGL  
TVSVLVLLTNLLVIAAIA SNRRFHQPIYYLLGNLAAADLF  
AGVAYLFLMFHTGPRTARLSLEGWFLRQGLDTSLTASVA  
TLLAIAVERHRSVMAVQLHSRLPRGRVVMLIVGVWVAALG  
LGLLPAHSWHCLCALDRCSRMAPLLSRSYLAVWALSLLV  
FLLMVAVYTRIFFYVRRRVQMAEHVSCHPRYRETTLSLV  
KTVVILGAFVVCWTPGQVVLLLDGLGCESC NVLAVEKYF  
LLLAEANSLVNAAVYSCRDAEMRRTFRRLLCCACLRQSTR  
ESVHYTSSAQGGASTRIMLPENGHPLMTPPF SYLELQRYA  
ASNKSTAPDDLWVLLAQPNQQD

Human Edg 5  
(SEQ ID NO:33)

Genbank  
Accession No.  
AF034780

MGSLYSEYLNPNKVQEHYNYTKETLETQETTSRQVASAFI  
VILCCAIVVENLLVLI AVARN SKFHSAMYLFLGNLAASDL  
LAGVAFVANTLLSGSVTLRLTPVQWFAREGSASITLSASV  
FSLLAIAIERHVAIAKV KLYGSDKSCRMLLLIGASWLI SL  
VLGGLPILGWNCLGHLEACSTVLPYAKHYVLCVVTIFSI  
ILLAIVALYVRIYCVVRSSHADMAAPQTLALLKTVTIVLG  
VFIVCWLPAFSILLDYACPVHSCPILYKAHYFFAVSTLN  
SLNPNVIYTWRSRDLRREVL RPLQCWRPGVG VQGRRRVGT  
PGHLLPLRSSSSLERGMHPTSPTFLEGNTVV

Human Edg6  
(SEQ ID NO:34)

Genbank  
Accession No.  
AJ000479

MNATGTPVAPESCQQLAAGGHSRLIVLHYNHSGRLAGRGG  
PEDGGLGALRGLSVAASCLVLENLLVLAAITSHMRSRRW  
VYYCLVNITLSDLLTGAAYLANVLLSGARTFRLAPAQWFL  
REGLLFTALAASTFSL LFTAGERFATMVRPVAESGATKTS  
RVYGFIGLCWLLAALLGMLPLLGNCLCAFDRCSSLLPLY  
SKRYILFCLVIFAGVLATIMGLYGAI FRLVQASGQKAPRP  
AARRKARRLLKTVLMILLAFLVCWGPLFGLLLADVFGSNL  
WAQEYLRGMDWILALAVLNSAVNP I IYSFRSREVCRAVLS  
FLCCGCLRLGMRGPGDCLARAVEAHSGASTTDSSLRPRDS  
FRGSRSLSFRMREPLSSISSVRSI

Human Edg7  
(SEQ ID NO:35)

Genbank  
Accession No.  
AF127138

MNECHYDKHMDFFYNRSNTDTVDDWTGTKLVIVLCVGTFF  
CLFIFFSNSLVIAAVIKNRKFHFPFYLLANLAAADFFAG  
IAYVFLMFNTGPVSKTLTVNRWFLRQGLDSSLTASLTNL  
LVIAVERHMSIMMRVHNSLTKKRVTLILLVWAIAIFMG  
AVPTLGWNCLCNISACSSLAPIYSRSLVFWTVSNLMAFL  
IMVVVYLRIYVYVVKRKTNVLSPTHSGSISRRTPMKLMKT  
VMTVLGAFVVCWTPGLVVLILLDGLNCRQCGVQHVKRWFLL  
LALLNSVNPPIIYSYKDEDMYGTMMKMICCFSQENPERRP  
SRIPSTVLSRSDTGSQYIEDSISQGAVCNKSTS

Human Edg 8  
(SEQ ID NO:36)

Genbank  
Accession No.  
AF317676

MESGLLRPAPVSEVIVLHYNNTGKLRGARYQPGAGLRADA  
VVCLAVCAFIVLENLAVLLVLGRHPRFHAPMFLLLGSLTL  
SDLLAGAAYAANILLSGPLTLKLSPALWFAREGGVFVALT  
ASVLSLLAIALERSLTMMARRGPAPVSSRGRTLMAAAAWG  
VSLLLGLLPALGWNCLGRLDACSTVLPLYAKAYVLFVLA  
FVGILAAICALYARIYCQVRANARRLPARPGTAGTTSTRA  
RRKPRSLALLRTL SVLLAFVACWGPLFLLLLLLDVACPAR  
TCPVLLQADPFLGLAMANSLLNPPIIYTLTNRDLRHALLRL  
VCCGRHSCGRDPSGSQQSASAAEASGGLRRLCLPPGLDGSF  
SGSERSSPQRDGLDTSGSTGSPGAPTAARTLVSEPAAD

Amend Table 3, beginning on page 21, line 1, by changing the font size and spacing  
as indicated below (no additions or deletions are to be made to Table 3):

**Table 3**

**Amino Acid Sequences of Chimeric Edg Receptors**

Edg1/3(ct)  
(SEQ ID NO:3)

MGPTSVPLVKAHRSSVSDYVNYDIIVRHYNNTGKLNISAD  
KENSIKLTSVVFILICCFIILENIFVLLTIWKTKKFHRPM  
YYFIGNLALSDDLAVAYTANLLLSGATTYKLTTPAQWFLR  
EGSMFVALSASVFSLLAIAIERIYITMLKMKLHNGSNNFRL  
FLLISACWVISLILGGLPIMGWNCISALSSCSTVLPLYHK  
HYILFCTTVFTLLLLSIVILYCRISLVRTSRRLTFRKN  
ISKASRSSEKSLALLKTVIIVLSVFIACWAPLFILLLLDV  
GCKVKTCDILFRAEYFLVLAVLNSGTNPPIIYTLT**SKEMRR**  
**AFFRLVCNCLVRGRGARASPIQPALDPSRSKSSSSNNSSH**  
**SPKVKEDLPHTDPSSCIMDKNAALQNGIFCN**

Edg1/3(i3ct)  
(SEQ ID NO:4)

MGPTSVPLVKAHRSSVSDYVNYDIIVRHYNITGKLNISAD  
KENSIKLTSVVFILICCFIILENIFVLLTIWKTCKFHRPM  
YYFIGNLALSDDLAVAYTANLLLSGATTYKLTTPAQWFLR  
EGSMFVALSASVFSLLAIAIERYITMLKMKLHNGSNNFRL  
FLLISACWVISLILGGLPIMGWNCISALSSCSTVLPLYHK  
HYILFCTTVFTLLLLSIVILYCRIYSLVRSSSRKVANHNN  
**SERSMALLRTV**IIVLSVFIACWAPLFILLLLLDVGCKVKTC  
DILFRAEYFLVLAVLNSGTNP I IYTLT**SKEMRRAFFRLVC**  
**NCLVRGRGARASPIQPALDPSRSKSSSSNNSSHSPKVKED**  
**LPHTDPSSCIMDKNAALQNGIFCN**

Edg1/3(i2i3ct)  
(SEQ ID NO:5)

MGPTSVPLVKAHRSSVSDYVNYDIIVRHYNITGKLNISAD  
KENSIKLTSVVFILICCFIILENIFVLLTIWKTCKFHRPM  
YYFIGNLALSDDLAVAYTANLLLSGATTYKLTTPAQWFLR  
EGSMFVALSASVFSLLAIAIERH**LTMIKMRPYDANKRHRL**  
FLLISACWVISLILGGLPIMGWNCISALSSCSTVLPLYHK  
HYILFCTTVFTLLLLSIVILYCRIYSLVRSSSRKVANHNN  
**SERSMALLRTV**IIVLSVFIACWAPLFILLLLLDVGCKVKTC  
DILFRAEYFLVLAVLNSGTNP I IYTLT**SKEMRRAFFRLVC**  
**NCLVRGRGARASPIQPALDPSRSKSSSSNNSSHSPKVKED**  
**LPHTDPSSCIMDKNAALQNGIFCN**

Edg 5/3(i3ct)  
(SEQ ID NO:37)

B4

MGSLYSEYLNPNKVQEHYNYTKETLETQETTSRQVASAFI  
VILCCAIVVENLLVLIAVARN**SKFH**SAMYLFLGNLAASDL  
LAGVAFVANTLLSGSVTLRLTPVQWFAREGSASITLSASV  
FSLAIAIAIERHVAIAKV**KLYG**SDKSCRMLLLIGASWLISL  
VLGGLPILGWNCLGHLEACSTVLPLYAKHYVLCVVTIFSI  
ILLAIVALYVRIYCV**VKSSSRKVANHNN**SERSMALLRTVT  
IVLGVFIVCWLPAFSILLDDYACPVHSCPILYKAHYFFAV  
STLNSLLNPVIYTW**ASKEMRRAFFRLVCNCLVRGRGARAS**  
**PIQPALDPSRSKSSSSNNSSHSPKVKEDLPHTDPSSCIMD**  
**KNAALQNGIFCN**

Edg 8/4(ct)  
(SEQ ID NO:38)

MESGLLRPAPVSEVIVLHYNITGKLRGARYQPGAGLRADA  
VVCLAVCAFIVLENLAVLLVLGRHPRFHAPMFLLLGSLTL  
SDLLAGAAYAANILLSGPLTLKLSPALWFAREGGVFVALT  
ASVLSLLAIALERS**LT**MARRGPAPVSSRGRTLMAAAAWG  
VSLLLGLLPALGWNCLGRLDACSTVLPLYAKAYVLFVLA  
FVGILAAICALYARIYCVVRANARRLPARPGTAGTTSTRA  
RRKPRSLALLRTL**SVLLAFVACWG**PLFLLLLLDVACPAR  
TCPVLLQADPFLGLAMANSLLNP I IYTL**RDAEMRRTFRRL**  
**LCCACLRQSTRESVHYTSSAQGGASTRIMLPENGHPLMTP**  
**PFSYLELQRYAASNKSTAPDDLWVLLAQPNQQD**

Amend Table 4, beginning on page 35, line 13, by changing the font size and spacing as indicated below (no additions or deletions are to be made to Table 4):

**Table 4**

**PCR Primers for Generating Chimeric Edg 1 Receptors**

<b><u>Primer</u></b>	<b><u>Direction</u></b>	<b><u>Position</u></b>	<b><u>Sequence 5'-3'</u></b>
Edg-1 (SEQ ID NO:6)		1	CCC/GCG/GTT/AAC/ATG/GGG/CCC/ACC/ AGC/GTC
Edg-3 (SEQ ID NO:7)	rev	1137	CGC/GGA/TCC/TCA/GTT/GCA/GAA/GAT/ CCC
E1/3 CTD (SEQ ID NO:8)		942	CAT/TTA/CAC/TCT/GAC/CAG/CAA/GGA/ GAT/GCG/GCG/G
E1/3 CTD (SEQ ID NO:9)	rev	942	CCG/CAT/CTC/CTT/GCT/GGT/CAG/AGT/ GTA/AAT/GAT/G
E1/3 i2 (SEQ ID NO:10)		402	GTC/TCC/TCG/CCA/TCG/CCA/TCG/AGC/ GGC/ACT/TGA/C
E1/3 i2 (SEQ ID NO:11)	rev	402	GTC/AAG/TGC/CGC/TCG/ATG/GCG/ATG/ GCG/AGG/AGA
E1/3 i2 (SEQ ID NO:12)		441	CGC/CAA/CAA/GAG/GCA/CCG/CCT/CTT/ CCT/GCT/AAT/C
E1/3 i2 (SEQ ID NO:13)	rev	441	GAT/TAG/CAG/GAA/GAG/GCG/GTG/CCT/ CTT/GTT/GGC/G
E1/3 i3 (SEQ ID NO:14)		684	CTA/CTC/CTT/GGT/CAG/GTC/CAG/CAG/ CCG/TAA/GGT/G
E1/3 i3 (SEQ ID NO:15)	rev	684	CAC/CTT/ACG/GCT/GCT/GGA/CCT/GAC/ CAA/GGA/GTA/G
E1/3 i3 (SEQ ID NO:16)		723	CAC/TGC/TGC/GGA/CCG/TGA/TTA/TCG/ TCC/TGA/GCG/TC
E1/3 i3 (SEQ ID NO:17)	rev	723	GAC/GCT/CAG/GAC/GAT/AAT/CAC/GGT/ CCG/CAG/CAG/TG

Amend Table 5, beginning on page 38, line 1, by changing the font size and spacing as indicated below (no additions or deletions are to be made to Table 5):

**Table 5**

**PCR Primers for Generating Chimeric Edg 5 Receptors**

<b><u>Primer</u></b>	<b><u>Direction</u></b>	<b><u>Position</u></b>	<b><u>Sequence 5'-3'</u></b>
Edg-5 (SEQ ID NO:18)		1	CCC/GCG/GTT/AAC/ATG/GGC/AGC/ TTG/TAC/TCG
Edg-3 (SEQ ID NO:19)	rev	1137	CGC/GGA/TCC/TCA/GTT/GCA/GAA/ GAT/CCC
E5/3 (SEQ ID NO:20)		864	CGT/CAT/CTA/CAC/GTG/GGC/CAG/ CAA/GGA/GAT/GCG/G
E5/3 (SEQ ID NO:21)	rev	864	CCG/CAT/CTC/CTT/GCT/GGC/CCA/ CGT/GTA/GAT/GAC/G
E5/3 i3 (SEQ ID NO:22)		633	CAT/CTA/CTG/CGT/GGT/CAA/GTC/ CAG/CAG/CCG/TAA/G
E5/3 i3 (SEQ ID NO:23)	rev	633	CTT/ACG/GCT/GCT/GGA/CTT/GAC/ CAC/GCA/GTA/GAT/G
E5/3 i3 (SEQ ID NO:24)		723	CAC/TGC/TGC/GGA/CCG/TGA/CCA/ TCG/TGC/TAG/GCG/TC
E1/3 i3 (SEQ ID NO:25)	rev	723	GAC/GCC/TAG/CAC/GAT/GGT/CAC/ GGT/CCG/CAG/CAG/TG



Amend Table 6, beginning on page 39, line 8, by changing the font size and spacing as indicated below (no additions or deletions are to be made to Table 6):

**Table 6**

**PCR Primers for Generating Chimeric Edg 8 Receptors**

<b><u>Primer</u></b>	<b><u>Direction</u></b>	<b><u>Position</u></b>	<b><u>Sequence 5'-3'</u></b>
Edg-8 (SEQ ID NO:26)		1	CCC/GCG/GTT/AAC/ATG/GAG/TCG/ GGG/CTG/CTG
Edg-4-mut (SEQ ID NO:27)	rev	1149	CGC/GGA/TCC/TCA/GTC/CTG/TTG/ GTT/GGG
E8/4 (SEQ ID NO:28)		920	CCA/TCA/TCT/ACA/CGC/TCC/GAG/ ATG/CTG/AGA/TGC/G
E8/4 (SEQ ID NO:29)	rev	920	CGC/ATC/TCA/GCA/TCT/CGG/AGC/ GTG/TAG/ATG/ATG/G